

# INTERNATIONAL SEARCH REPORT

Rec'd PCT/PTO

09 MAR 2005

International Application No

PCT/EP 03/09808

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C08F287/00 C08F297/04 C08L51/00 C08L53/02 C08L25/06

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C08F C08L C08J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 01/85816 A (GAUSEPOHL HERMANN ; BASF AG (DE); DESBOIS PHILIPPE (DE); SCHADE CHR) 15 November 2001 (2001-11-15) * Ansprüche 1,2,5,6,9,12-17 ; Tabelle 2 Beispiel H1 ; Seite 5, Zeile 25-27 ; Seite 4, Zeile 13 - Seite 5, Zeile 15 ; Seite 3, Zeile 15-26 * page 2, lines 32-34	1-9
X	US 4 153 647 A (GLUKHOVSKOI VLADIMIR S ET AL) 8 May 1979 (1979-05-08) * Anspruch 9 ; Tabelle 1 Beispiel 1,2, in besonders "Impact resistance by Sharpy" ; Beispiele * abstract	1-7

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Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

### ° Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

9 February 2004

Date of mailing of the international search report

19. 05. 2004

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 307 818 A (BASF AG) 22 March 1989 (1989-03-22) * Ansprüche 1-8 ; Beispiele *	1-5
P,X	WO 03/035709 A (GAUSEPOHL HERMANN ;BASF AG (DE); DEMETER JUERGEN (DE); DESBOIS PHI) 1 May 2003 (2003-05-01) * Ansprüche 1-10 ; Zusammenfassung ; Beispiele *	1-5
Y	WO 00/32662 A (MOEDERSHEIM NORBERT ;BASF AG (DE); MOORS RAINER (DE); SCHWABEN HAN) 8 June 2000 (2000-06-08) abstract; claims 1-5	1-9
Y	WO 99/67308 A (GAUSEPOHL HERMANN ;BASF AG (DE); DESBOIS PHILIPPE (DE); SCHADE CHR) 29 December 1999 (1999-12-29) abstract; claims 1-14; table III	1-9
A	WO 99/40135 A (GAUSEPOHL HERMANN ;BASF AG (DE); MOORS RAINER (DE); FISCHER WOLFGA) 12 August 1999 (1999-08-12) abstract; example 12	1-9
A	EP 0 460 497 A (BASF AG) 11 December 1991 (1991-12-11) abstract; claims 1,2; examples 1,2	1-9
A	US 4 493 922 A (GAUSEPOHL HERMANN ET AL) 15 January 1985 (1985-01-15) column 4, lines 17-19; examples 1-3	1-9

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International application No.  
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## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
  
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
  
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
  
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
  
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-9

### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

Continuation of Box II

The International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims 1-9

Anionically polymerised impact-resistant polystyrene, characterised in that it has a melt volume-flow rate (MVR) of at least  $8 \text{ cm}^3/10 \text{ min}$  measured according to EN ISO 1133 at a test temperature of  $200^\circ\text{C}$  with a nominal load of 5 kg.

Claim 5 discloses thermoplastic moulding compounds.

Claims 6 to 9 disclose a method for producing impact-resistant polystyrene as defined in claims 1 to 4.

2. Claims 10-11

An initiator composition and use thereof for an anionic polymerisation reaction as defined in claims 10 and 11.

3. Claims 12-13

Use of the thermoplastic moulding compounds of claim 5 or of the impact-resistant polystyrene of claims 1 to 4 in the production of mouldings or films or fibres or foams.

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0185816	A	15-11-2001	DE 10022504 A1	15-11-2001
			AU 6027301 A	20-11-2001
			BR 0110658 A	11-02-2003
			CA 2408345 A1	06-11-2002
			CN 1427855 T	02-07-2003
			WO 0185816 A1	15-11-2001
			EP 1280839 A1	05-02-2003
			JP 2003532767 T	05-11-2003
			US 2003139531 A1	24-07-2003
-----				
US 4153647	A	08-05-1979	NONE	
-----				
EP 0307818	A	22-03-1989	DE 3730886 A1	23-03-1989
			EP 0307818 A2	22-03-1989
			JP 1101349 A	19-04-1989
-----				
WO 03035709	A	01-05-2003	DE 10152116 A1	30-04-2003
			WO 03035709 A2	01-05-2003
-----				
WO 0032662	A	08-06-2000	DE 19927125 A1	08-06-2000
			AT 214715 T	15-04-2002
			AU 1654500 A	19-06-2000
			DE 59901025 D1	25-04-2002
			WO 0032662 A1	08-06-2000
			EP 1098917 A1	16-05-2001
			ES 2174648 T3	01-11-2002
-----				
WO 9967308	A	29-12-1999	DE 19828104 A1	30-12-1999
			AU 2719199 A	23-08-1999
			AU 4776199 A	10-01-2000
			BR 9907648 A	30-04-2002
			CN 1119361 B	27-08-2003
			DE 59907627 D1	11-12-2003
			WO 9940135 A1	12-08-1999
			WO 9967308 A1	29-12-1999
			EP 1053266 A1	22-11-2000
			EP 1095078 A1	02-05-2001
			JP 2002502899 T	29-01-2002
			JP 2002518562 T	25-06-2002
			US 6506846 B1	14-01-2003
			US 6410654 B1	25-06-2002
-----				
WO 9940135	A	12-08-1999	DE 19804912 A1	12-08-1999
			DE 19828104 A1	30-12-1999
			AU 2719199 A	23-08-1999
			AU 3250899 A	23-08-1999
			BR 9907648 A	30-04-2002
			BR 9910824 A	30-01-2001
			CN 1119361 B	27-08-2003
			CN 1128827 B	26-11-2003
			DE 59907013 D1	23-10-2003
			DE 59907627 D1	11-12-2003
			WO 9940136 A1	12-08-1999
			WO 9940135 A1	12-08-1999
			EP 1053266 A1	22-11-2000
			EP 1053267 A1	22-11-2000
			JP 2002502899 T	29-01-2002
			JP 2002502900 T	29-01-2002

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 03/09808

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9940135	A	US 6399703 B1	04-06-2002
		US 6506846 B1	14-01-2003
		AU 4776199 A	10-01-2000
		WO 9967308 A1	29-12-1999
		EP 1095078 A1	02-05-2001
		JP 2002518562 T	25-06-2002
		US 6410654 B1	25-06-2002
EP 0460497	A 11-12-1991	DE 4018244 A1	12-12-1991
		EP 0460497 A2	11-12-1991
		JP 4226142 A	14-08-1992
US 4493922	A 15-01-1985	DE 3035570 A1	06-05-1982
		CA 1194247 A1	24-09-1985
		DE 3168499 D1	07-03-1985
		EP 0048389 A1	31-03-1982